

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
30 June 2005 (30.06.2005)

PCT

(10) International Publication Number
WO 2005/060053 A2

(51) International Patent Classification⁷: **H01S**
(21) International Application Number:
PCT/SE2004/001903
(22) International Filing Date:
17 December 2004 (17.12.2004)
(25) Filing Language: English
(26) Publication Language: English
(30) Priority Data:
0303430-3 19 December 2003 (19.12.2003) SE

(71) Applicant (for all designated States except US): **COBOLT AB** [SE/SE]; Kräftriket 8, S-104 05 Stockholm (SE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **NORDBORG, Jenni** [SE/SE]; Ruddammsvägen 19, S-114 21 Stockholm (SE). **SPIEKERMANN, Stefan** [DE/SE]; Tegvägen 10, S-175 53 Järfälla (SE). **KARLSSON, Håkan** [SE/SE]; Bondegatan 63, S-116 34 Stockholm (SE).

(74) Agent: **AWAPATENT AB**; P.O. Box 45086, S-104 30 Stockholm (SE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



WO 2005/060053 A2

(54) Title: **MULTIPLE WAVELENGTH LASER ARRANGEMENT**

(57) Abstract: A laser arrangement comprising a first (1) and a second (2) resonant cavity for generating a first and a second fundamental wavelength. A first (6) and a second (7) non-linear region are provided in the second cavity (2) for sum-frequency mixing of the radiation generated in the first cavity and in the second cavity, and for frequency-doubling of the radiation generated in the second cavity, respectively.